

I. AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A process for preparing (per)fluorohalogenethers containing the
-SO₂F group and having general formula (I):



wherein:

- A and A', equal to or different from each other, are Cl or Br;
- R can have the following meanings: a (per)fluorinated ~~preferably perfluorinated~~, substituent, selected from the following groups: linear or branched C₁-C₂₀ alkyl, C₃-C₇ cycloalkyl; aromatic, C₆-C₁₀ arylalkyl or alkylaryl; C₅-C₁₀ heterocyclic or alkylhetero-cyclic;
optionally containing one or more oxygen atoms;
when R is fluorinated, it can optionally contain one or more H atoms and/or one or more halogen atoms different from F;

by reaction of carbonyl compounds having formula (II):



wherein R is as above;

in liquid phase with elemental fluorine and with olefinic compounds having formula (III):



wherein A and A' are as above,

by operating at temperatures from -120°C to -20°C, ~~preferably from -100°C to -40°C~~,
optionally in the presence of a solvent inert under the reaction conditions.

2. (Original) A process according to claim 1, wherein the fluorine is diluted with an inert gas selected between nitrogen or helium.
3. (Currently Amended) A process according to claim 1, wherein the formula (III) compounds are selected from 1,2-dichloro-1,2-difluoroethylene (CFC 1112) ~~[[.]]~~ and 1,2-dibromo-1,2-difluoroethylene ~~, preferably CFC 1112.~~
4. (Currently Amended) A process according to claim 1, wherein the solvent is selected from the group ~~comprising~~ consisting of the following compounds: (per)fluorocarbons, (per)fluoroethers, (per)fluoropolyethers, perfluoroamines, or respective mixtures; fluoropolyethers containing at least one hydrogen atom in one end group ~~, preferably in both end groups~~; fluoroethers containing at least one hydrogen atom in one end group ~~, preferably in both end groups~~, or containing non fluorinated end groups of the type OR_a wherein R_a is an alkyl from 1 to 3 carbon atoms.
5. (Currently Amended) A process according to claim 1, wherein, when R in formula (I) is fluorinated, it optionally contains one or more H atoms and/or one or more halogen atoms different from F ~~, preferably Cl.~~
6. (Previously Presented) A process according to claim 1 carried out in a semicontinuous or a continuous way.

7. (Original) A semicontinuous process according to claim 6, wherein the molar ratio (I-I):(III) ranges from 10:1 to 1:20 and the used amount by moles of fluorine is equal to or lower than the amount by moles of (III).

8. (Original) A continuous process according to claim 6, wherein the molar ratio (II):(III) is as defined in claim 7 and the molar ratio F_2 :(III) ranges from 1:20 to 10:1.

9. (Currently Amended) A process according to claim 1, wherein one operates at partial conversion of compound (II) ~~, preferably the conversion ranges from 10% to 40%, still more preferably from 10% to 20%.~~

10. (Currently Amended) ~~A process according to claim 1,~~ A process for preparing (per)fluorohalogenethers containing the $-SO_2F$ group and having general formula (I):



wherein:

- A and A', equal to or different from each other, are Cl or Br;
- R can have the following meanings: a (per)fluorinated substituent, selected from the following groups: linear or branched C_1 - C_{20} alkyl, C_3 - C_7 cycloalkyl; aromatic, C_6 - C_{10} arylalkyl or alkylaryl; C_5 - C_{10} heterocyclic or alkylheterocyclic;
optionally containing one or more oxygen atoms;

when R is fluorinated, it can optionally contain one or more H atoms and/or one or more halogen atoms different from F;

by reaction of carbonyl compounds having formula (II):



wherein R is as above;

in liquid phase with elemental fluorine and with olefinic compounds having formula (III):



wherein A and A' are as above,

by operating at temperatures from -120°C to -20°C, optionally in the presence of a solvent inert under the reaction conditions, and

wherein [[the]] a dehalogenation step is carried out to obtain [[the]] fluorinated vinyl ethers.

11. (New) A process accordingly to claim 1, wherein R is a perfluorinated substituent.

12. (New) A process accordingly to claim 1, wherein the temperatures are from -100°C to -40°C.

13. (New) A process according to claim 3, wherein the formula (III) compounds are CFC 1112.

14. (New) A process according to claim 4, wherein the fluoropolyethers contain at least one hydrogen atom in both end groups;

15. (New) A process according to claim 4, wherein the fluoroethers contain at least one hydrogen atom in both end groups.

16. (New) A process according to claim 5, wherein the one or more halogen atoms is Cl.

17. (New) A process according to claim 9, wherein the conversion ranges are from 10% to 40%.

18. (New) A process according to claim 17, wherein the conversion ranges are from 10% to 20%.